REMARKS

Previously submitted claims 1-43 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 23, 26, 29 and 36 were said to use improper alternative language in regards to the protective layer groupings. It was noted it is not clear what the choices are for the two films which make up the protective layer.

Claims 1, 23, 26, 29 and 36 have been amended in a non-narrowing manner to clarify the grouping of the protective layer to show that the protective layer can be at least one or a combination of the members of the recited group.

It was also noted that the term "zinc oxide, tin oxide" was unclear as to whether the film was made of both zinc and titanium oxides or is this an alternative grouping. It is respectfully submitted that the term "zinc oxide, tin oxide film" is defined in the specification at page 3, lines 30-31. It is defined as a film having oxides of tin and zinc.

Claims 4, 6, 8 and 22 have been amended in a non narrowing fashion to utilize the terminology suggested by the Examiner. Also the dependency of claim 30 has been amended to claim 29 and claims 31-34 are indirectly dependent form claim 29 from their existing dependencies.

Claim 37 is amended to show that the optional primer and second dielectric layers are present. Also, claim 40 has been amended to provide antecedent basis for the term "the second dielectric layer". Also, claim 39 has been canceled. In regards to claim 41, the order of the films has been clarified in a non-limiting manner to accomplish the purpose stated. In regards to claim 36 in the protective layer which is a metal, this is not a primer layer but is a heat, convertible film to a metal oxide.

It is respectfully submitted that claims 1-43 now as rewritten in a non-narrowing manner comply with 35 U.S.C. 112, and are in condition for allowance. The Office Action noted

that Claims 1-34, 42 and 43 would be allowable if rewritten or amended to overcome the objections under 35 U.S.C. 112, second paragraph.

Previously submitted claims 36 and 40 were rejected under 35 U.S.C. 102(b) over U.S. Patent 5,059,295. Claim 36 has been amended to delete the titanium mentioned in the Finley patent as a single protective layer along with the general teaching at column 8 lines 2-3. Also, claim 37 was rejected under 35 U.S.C. 103(a) over the Finley U.S. Patent 5,059,295 in view of the Arbab et al. patent, EP 0 803 481 A2. Claim 37 is dependent from claim 36, and claim 36 has been amended, to overcome the teachings and suggestions of the Finley '295 patent. Therefore, it is respectfully submitted that claim 37 is patentable over this combination of references.

Accordingly, in view of the foregoing non-narrowing amendments and remarks, reconsideration and allowance of the pending claims and newly added claims are respectfully requested.

Attached hereto is a marked-up version of the amendments to the claims made by the instant amendment. The attached page is captioned **"VERSION WITH MARKINGS TO SHOW CHANGES MADE"**.

Respectively submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 39 has been canceled without prejudice, and claims 44 and 45 are added. Claims 1, 4, 6, 8, 22, 23, 26, 29, 30, 36, 37, 40 and 41 have been amended as follows:

1. (Twice Amended) An infrared reflective coated article comprising:

a substrate;

a dielectric layer sputter deposited over the substrate, the layer comprising a first zinc stannate film deposited over the substrate having zinc in weight percent range of equal to and greater than 10 and equal to and less than 90, and tin in the weight percent range of equal to and less than 90 and equal to and greater than 10, and an electrical enhancing film deposited over the zinc stannate film, the electrical enhancing film selected from the group of films consisting of zinc oxide, tin oxide film and a second zinc stannate film wherein the composition of the first zinc stannate film is at least about 5 weight percent different than the composition of the second zinc stannate film, and

an infrared reflective layer deposited on the dielectric layer,

a metal primer layer over the infrared reflective layer;

a second dielectric layer over the primer layer; and

a protective layer of at least two films selected from the group of metal-containing films which are selected from different transition metals of Groups 4, 5, 6, or 10 of the Periodic Table of Elements, and~~/or~~ silicon-containing films, and ~~selected from: different metals or~~ metal and silicon films, ~~or~~ films of metal and metal-oxy materials, ~~or~~ films of metal and silicon oxy-materials, ~~or~~ and films of silicon and metal-oxy materials, films of~~or~~ silicon and silicon oxy-materials, and ~~or~~films of metal oxy and silicon oxy materials, where the oxy materials are selected from oxides and oxynitrides ~~and where the metal is selected from a~~

~~transition metal of Groups 4, 5, 6 or 10 of the Periodic Table of Elements~~, and wherein the protective layer is in a position where it can perform the protective function for providing durability to the dielectric layer, infrared reflective layer, metal primer layer, and second dielectric layer.

4. (Amended) The article stack of claim 1 wherein the dielectric layer is a first dielectric layer and the infrared reflective layer is a first infrared reflective layer and further including:

a metal primer layer over the first infrared reflective layer;

a second dielectric layer over the primer layer and the protective layer is ~~a~~an overcoat over the second dielectric layer.

6. (Amended) The article of claim 1 wherein the dielectric layer is a first dielectric layer and the infrared reflective layer is a first infrared reflective layer and further including:

a first metal primer layer over the first infrared reflective metal layer;

a second dielectric layer ~~including~~ over the first primer layer;

a second infrared reflective layer over the second dielectric layer;

a second metal primer layer over the second infrared reflective layer;

a third dielectric layer ~~including~~ over the second metal primer layer; and

the protective layer is over the third dielectric layer.

8. (Amended) The coating stack of claim 1 wherein the dielectric layer is a first dielectric layer and the infrared reflective layer is a first infrared reflective layer and further including:

a first metal primer layer over the first reflective layer;

a second dielectric layer over the first metal primer layer, the second dielectric layer comprising a first dielectric film and a zinc stannate film defined as a first zinc stannate film, the first zinc stannate film having zinc in the weight percent range of equal to and greater than 10 and equal to and less than 90 and tin in the weight percent range of equal to and greater than 10 and equal to and less than 90, the ~~first~~ second dielectric layer deposited over the first metal primer layer;

a second infrared reflective layer deposited over the second dielectric layer;

a second metal primer layer deposited over the second infrared reflective layer;

a third dielectric layer deposited over the second primer layer; and

the protective layer is over the third dielectric layer.

22. (Amended) The coating stack of claim 1 wherein the protective layer has at least two films selected from a metal of titanium, zirconium, niobium, tantalum, chromium, nickel and alloys thereof~~,~~; and a metal oxy material selected from: titanium oxides, titanium oxynitride, zirconium oxides, zirconium oxynitrides, niobium oxides, niobium oxynitrides, tantalum oxide, tantalum oxynitride, chromic oxides, chromic oxynitrides, nickel oxide, nickel oxynitride~~,~~; and silicon oxide, silicon dioxide, silicon aluminum nitride and combinations ~~or~~ and mixtures of any two or more of these, where the first film of the layer is selected from ~~either~~ the silicon, metal ~~or~~ and the metal oxy material ~~is the first film of the layer~~.

23. (Twice Amended) A coated article comprising:

a substrate;

a first dielectric layer over the substrate;

a first infrared reflective layer over the first dielectric layer;

a first metal primer layer over the first infrared reflective layer;

a second dielectric layer over the first metal primer, the second dielectric layer having a first dielectric film selected from the group consisting of zinc oxide, tin oxide film and a first zinc stannate film, and a second dielectric film the second dielectric film having a composition different than the first dielectric film of the second dielectric layer;

a second infrared reflective layer over the second dielectric layer;

a second primer layer over the second reflective layer;

a third dielectric layer over the second metal primer layer; and

a protective layer of at least two films selected from the group of metal-containing films, which are selected from different transition metals of Groups 4, 5, 6 or 10 of the Periodic Table of Elements, and~~/or~~ silicon-containing films, and ~~selected from: different metals or~~ metal and silicon films, ~~or~~ films of metal and metal-oxy materials, films of~~or~~ metal and silicon oxy-materials, films of~~or~~ silicon and metal-oxy materials, films of~~or~~ silicon and silicon oxy-materials, films of~~or~~ metal oxy and silicon oxy materials, where the oxy materials are selected from oxides and oxynitrides and ~~where the metal is selected from a transition metal of Groups 4, 5, 6 or 10 of the Periodic Table of Elements~~wherein the protective layer is in a position where it can perform the protective function for providing durability to the dielectric layers, infrared reflective layers, and metal primer layers.

26. (Twice Amended) A coated article comprising:

a substrate;

a first dielectric layer over the substrate;

a first infrared reflective layer over the first dielectric layer;

a first metal primer layer over the first infrared reflective layer;

a second dielectric layer over the first metal primer layer;

a second infrared reflective layer over the second dielectric layer;

a second metal primer layer over the second reflective metal layer;

a third dielectric layer having a first dielectric film selected from the group consisting of zinc oxide film; zinc oxide, tin oxide film; a first zinc stannate film and a second dielectric film overlying the first dielectric film, the second dielectric film having a composition different from the first dielectric film; and

the protective layer overlying the third dielectric layer where the protective layer is at least two films selected from the group of: metal-containing films, which are selected from different transition metals of Groups 4, 5, 6 or 10 of the Periodic Table of Elements, and~~/or~~ silicon-containing films, and~~selected from: different metals or~~ metal and silicon films, films of~~or~~ metal and metal-oxy materials, films of~~or~~ metal and silicon oxy-materials, films of~~or~~ silicon and metal-oxy materials, films of~~or~~ silicon and silicon oxy-materials, films of~~or~~ metal oxy and silicon oxy materials, where the oxy materials are selected from oxides and oxynitrides~~ and where the metal is selected from a transition metal of Groups 4, 5, 6 or 10 of the Periodic Table of Elements~~.

29. (Twice Amended) A coated article comprising:

a substrate;

a first dielectric layer over the substrate;

a first infrared reflective layer over the first dielectric layer;

a first primer layer over the first reflective metal layer;

a second dielectric layer having a first dielectric film selected from the group consisting of zinc oxide, tin oxide film and

a first zinc stannate film, and a second dielectric film overlying the first dielectric film having a composition different than the first dielectric film of the second dielectric layer;

a second infrared reflective layer over the second dielectric layer;

a second primer layer over the second reflective layer;

a third dielectric layer over the second metal primer layer, the third dielectric layer having a first dielectric film selected from the group consisting of a zinc oxide, tin oxide film and a first zinc stannate film and a second dielectric film, the second dielectric film of the third dielectric layer have a composition different than the composition of the second dielectric film of the third dielectric layer; and

the protective layer overlying the third dielectric layer where the protective layer is at least two films selected from the group of: metal-containing and~~/or~~ silicon-containing films, which are selected from: different metals or metal and silicon or metal and metal-oxy materials or metal and silicon oxy-materials or silicon and metal-oxy or silicon and silicon oxy-materials or metal oxy and silicon oxy materials where the oxy materials are selected from oxides and oxynitrides and where the metal is selected from a transition metal of Groups 4, 5, 6 or 10 of the Periodic Table of Elements.

30. (Amended) The coated article of claim ~~31~~29 wherein the first dielectric layer, the second dielectric film of the second and third dielectric layers are each a zinc stannate film having zinc in the weight percent range of 10-90 and tin in the weight percent range of 90-10.

36. (Amended) A coated article comprising:

a substrate;

at least one dielectric layer over the substrate;

at least one infrared reflective layer over the first dielectric layer;

optionally a first metal primer layer over the first infrared reflective layer;

optionally a second dielectric layer over a first metal primer; and

at least one protective layer selected from (A) a heat convertible metal film wherein the metal is selected from ~~titanium,~~ zirconium, niobium, tantalum, chromium, nickel and alloys thereof and alloys with silicon, (B) at least two films selected from metal-containing and/or silicon-containing films selected from: metal and/or silicon and metal-oxy and or silicon oxy-materials where the oxy materials are selected from oxides and oxynitrides and where the metal is the same or different and selected from a transition metal of Groups~~,~~ 4, 5, 6 or 10 of the Periodic Table of Elements, wherein the protective layer is located in the stack of layers to provide ~~chemical and/or mechanical~~ durability to the stack of layers.

37. (Amended) A coated article of Claim 36 wherein the dielectric layer is a first dielectric layer and the infrared reflective layer is a first infrared reflective layer and the primer layer is present and further including:

a second dielectric layer over the primer layer,

a second infrared reflective layer over the second dielectric layer;

optionally a primer layer over the second infrared reflective layer

~~a second dielectric layer over the primer layer~~; and

the protective layer is an overcoat over the second dielectric layer.

40. (Twice Amended) A coated article of Claim 36 which has a second dielectric layer and wherein the protective layer is a heat convertible metal located between the first dielectric layer and the second dielectric layer below the first reflective layer.

41. (Twice Amended) A coated article of Claim 37 wherein the protective layer has at least two films selected from ~~in either order of~~ metal or silicon; and metal oxy material or silicon oxy material and is located between the second dielectric layer that is on the reflective layer and a third optional dielectric layer over the protective layer.

New Claims 44 and 45 have been added as follows:

44. A coated article of Claim 1, wherein the protective layer provides chemical durability.

45. A coated article of Claim 1, wherein the protective layer provides mechanical durability.